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Interventions for Individuals After Mass Violence and Disaster: Recommendations from the Roundtable on Screening and Assessment, Outreach, and Intervention for Mental Health and Substance Abuse Needs Following Disasters and Mass Violence

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ABSTRACT. In August 2003, an international expert panel was convened by the U.S. Department of Health and Human Services and the U.S. Department of Veterans Affairs in Bethesda, Maryland, to discuss outreach and intervention for behavioral health needs following disasters and mass violence. This document is the outgrowth of a paper prepared by the working group on individual interventions that was formed at the roundtable. In this document, we discuss basic considerations regarding individual post-disaster interventions and outreach strategies. We then provide brief overviews of the research base and

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KEYWORDS. Disasters, mass violence, psychological first aid, early intervention, CBT, debriefing, psychoeducation

INTERVENTIONS FOR INDIVIDUALS AFTER MASS VIOLENCE AND DISASTER

In August 2003, an international expert panel was convened in Bethesda, Maryland, to discuss outreach and intervention for mental health and substance abuse needs following disasters and mass violence. The meeting was sponsored by the U.S. Department of Health and Human Services (Substance Abuse and Mental Health Services Administration and National Institute of Mental Health) and the U.S. Department of Veterans Affairs. Several working groups were formed at the panel meeting to document recommendations for the design and implementation of disaster services, as well as to delineate areas in need of further research. This document summarizes the findings of a working group on individual interventions that was formed at the roundtable.

In this document, we discuss basic considerations regarding individual post-disaster interventions and individual outreach strategies. Specific examples drawn from the response to the September 11th attacks in New York are provided. We then provide brief overviews of the research base and recommendations concerning interventions for different time periods in the aftermath of mass violence or disaster. This is followed by a discussion of areas in need of further clarification and development.

This document should not be considered a comprehensive review of the treatment literature relevant to disasters and mass violence. Studies cited in this review were included on the basis of their specific relevance to disaster or mass violence situations, or due to particularly strong study designs. Several thorough reviews of the early intervention literature have been published (e.g., Bisson, 2003; Litz, Gray, Bryant, & Adler, 2002; McNally, Bryant, & Ehlers, 2003; Rose, Bisson, & Wessely, 2002; Watson, Friedman, Gibson, Ruzek, Norris, & Ritchie, 2003). The

interested reader is referred to Foa, Keane, and Friedman's (2000) text, *Effective Treatments for PTSD* for a more comprehensive discussion of efficacious treatment for chronic PTSD.

Individual Interventions After Disasters: Some Basic Considerations

Goals of Individual Intervention. Mental health interventions for individuals after mass violence or disaster may take many forms, may be introduced at a variety of time points, and may serve a variety of functions. Goals will differ, depending on the stage of intervention and amount of time passed since the trauma. For example, goals in the immediate aftermath may revolve around crisis stabilization and successful access to basic resources (e.g., food, shelter, safety), while later-stage goals may involve reduction of psychological symptoms or improvement in coping abilities. We have listed some of the prominent goals of post-disaster individual interventions, broadly defined by the expert panel as follows:

- Crisis stabilization and provision of support in the immediate aftermath
- Surveillance to monitor which individuals may need more intensive services over time
- Promotion of resilience and effective coping
- Improved manageability of a range of acute stress reactions
- Reduction of problematic coping efforts (e.g., alcohol/drug misuse, extreme social withdrawal)
- Maintenance and improvement in role functioning
- Prevention and/or treatment of chronic distress, psychopathology, and problems in living
- Referral of appropriate individuals for more intensive services over time.

A primary goal of disaster mental health services is prevention of the development of mental health and behavioral problems. Although most efforts to date have focused on the prevention of PTSD, interventions should also work to prevent development of other problems, including alcohol abuse, drug abuse (including inappropriate use of medications), depression, anxiety disorders, and so on, as well as the exacerbation of pre-existing mental disorders. Such preventive interventions do not necessarily need to be implemented by mental health professionals.

Anecdotal reports after 9/11 suggested that survivors were generally more receptive to such prevention efforts if offered by trained individuals outside of the mental health field (e.g., community members, nurses, clergy).

Primacy of Education and Support. Sharing of educational information and enhancement of social support form much of what is offered to survivors in the immediate aftermath of disaster, and more technical interventions (such as those reviewed later) must complement these more routinely provided services. Post-disaster education should be designed to (1) help survivors better understand a range of post-trauma responses; (2) help survivors view their post-trauma reactions as expectable and understandable (e.g., not as reactions to be feared, not as signs of personal failure or weakness, not as signs of mental illness); (3) help survivors recognize the circumstances under which they should consider seeking further counseling; (4) inform them how and where they can access additional help, including mental health counseling; increase use of social supports; increase use of other adaptive ways of coping with the trauma and its effects (e.g., talking to others about the experience of trauma); (5) decrease use of problematic forms of coping (e.g., alcohol consumption, social isolation); and (6) increase ability to help family members cope (e.g., information about how to talk to children about what happened). Accurate and timely information regarding the nature of the unfolding disaster situation and available helping resources is also an important part of education. Efforts should be made to reduce shame or embarrassment at seeking help, and mental health services should be described as practical opportunities for support. Because alcohol consumption may increase following exposure to trauma, it is important that education include discussion of alcohol use. Brief interventions have been shown capable of reducing excessive drinking (Heather, 1995), and while there are no trials in the aftermath of disaster or terrorist attacks, brief intervention with patients hospitalized for injury has been found to reduce alcohol consumption in those with existing alcohol problems (Gentilello et al., 1999). Individuals will differ in their ability, during a time of crisis or stress, to absorb and retain educational messages; therefore it is important to provide survivors and their families with written educational materials that can be reviewed over time.

Along with education, much early intervention involves providing survivors with instrumental and emotional support. While crisis counselors may act as a significant direct source of social support, the reality is that most social support is offered within the social network of the survivor. Interve
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survivor. Interventions should be designed, when feasible and desired by the individual, to include the families, friends, and work colleagues of individuals, as well as the more formal helping networks within the local community (e.g., primary care providers, clergy). Indeed, survivors may be more willing to accept support from those outside of traditional mental health fields. Individuals who work with survivors should actively explore how well survivors are able to access and use social support. To this end, they should talk to survivors about their sources of social support, the well-being of their significant others, and about ways of asking for and giving social support. Helping individuals to role-play and practice social skills is recommended to increase both social skills and self-efficacy.

Matching Survivors to Services. While information, education, and support will often be adequate for individuals experiencing relatively low levels of distress, those who continue experiencing debilitating levels of distress approximately two weeks post-trauma may be considered for referral to more intensive care. While referrals at the two week point may not be practical on a large scale, randomized controlled trials (RCTs) suggest that a cognitive behavioral intervention for Acute Stress Disorder, delivered as early as two weeks post-trauma may decrease the chance of developing full-blown PTSD (Bryant, Harvey, Dang, Sackville, & Basten, 1998; Bryant, Moulds, Guthrie, & Nixon, 2005; Bryant, Sackville, Dang, Moulds, & Guthrie, 1999). If the therapist resources are available in an affected community, referrals for individuals suffering from Acute Stress Disorder would be appropriate at the two week point. However, research also indicates that a substantial amount of symptom reduction occurs within the first three months of trauma. Given that those who do not experience symptom reduction within the initial three months are at-risk for chronic PTSD (Rothbaum, Foa, Riggs, Murdock, & Walsh, 1992; Valentiner, Foa, Riggs, & Gershuny, 1996), it is certainly important to provide referrals for more intensive services to those who are continuing to experience significant levels of post-disaster symptoms at the three-month period. Referrals at the three month point for those who continue to be symptomatic may be the most practical intervention approach when large numbers of people have been affected.

Within the first weeks of trauma exposure, for individuals who may be considered to be at risk for PTSD and other chronic difficulties based on known risk factors, an alternative to treatment referral is to obtain permission to initiate a follow-up contact. While some individuals may not want to give out contact information due to a desire for anonymity,

others will feel comfortable with and even reassured by such a gesture. This practice may reduce the likelihood of unneeded referrals and may help maintain contact with potentially vulnerable individuals. In addition, it may provide for assessments to be conducted later, 2-3 months post-event, when the need for counseling may be more reliably determined and when survivors might be more receptive to the offer of counseling help.

The Need to Encourage Utilization of Individual Interventions. Because many trauma survivors are reluctant to seek counseling, it is important to take steps to maximize accessibility of mental health services and engagement in the helping process. This is in part accomplished by active outreach to survivors and their families, but must be pursued in many ways as part of ongoing disaster mental health response. Often, outreach involves having staff walk door-to-door, or engage survivors on the street (i.e., bus stops, shopping areas, park benches) and in the places where they congregate (in Disaster Assistance Centers, local neighborhood stores, places of worship, schools, and other community gathering spaces), where informal crisis counseling may naturally occur during routine activities. Adaptation of services to the cultural contexts of the affected groups may also help to engage survivors; cultural sensitivity in design of services may affect rates of self-referral, engagement with care, and retention in counseling services. Again, it is possible that individuals outside of traditional mental health roles may be especially well-suited to engage survivors because they may not be associated with the stigma that accompanies mental health.

The Need to Train Providers. With all individual interventions, care should be taken to ensure that providers are adequately trained and supervised. Levels of required experience and training will differ according to the nature of the interventions delivered (Young, Ruzek, Wong, Salzer, & Naturale, in press). Intensity of training must be matched to the level of skills required by the intervention. But across all the intervention methods, as much as possible, ongoing supervision/consultation following training is considered best practice for training in behavioral health fields. Changes in professional practice appear to be unlikely after a one-time training, although they increase significantly with follow-up supervision (Hoge, 2004).

It is important that training be routinely delivered to a broad range of professionals, including those outside of the traditional mental health arena. For example, trained professionals should include clergy, nurses, and teachers, especially in rural areas. Primary care physicians will also be an important group to train, since many survivors will seek help from

their doctor rather than visit a mental health setting. Hospital emergency room medical personnel are also important targets for training, because they will be a first line of contact for some (e.g., seriously injured survivors and their families, those concerned about exposure to biological or chemical agents). Training activities should be as realistic as possible (e.g., simulating the chaos of the intervention environment) and, whenever possible, go beyond simple provision of information to include skills training, role playing, and supervision.

When training is delivered before disaster occurs, practice of intervention skills is often inhibited by the fact that incidents of mass violence and disaster occur only infrequently. Ways should be found to ensure that providers continue to develop their skills in the absence of such events, if necessary by working with trauma survivors in contexts other than disaster.

Timing of Interventions. For purposes of this review, interventions have been divided into three time periods: 0-14 days (immediate), 14 days to 3 months (acute period), and three months onward (later stages). This division of time periods is somewhat arbitrary. For example, some interventions offered at 8 days may be identical to interventions provided at 20 days. Similarly, interventions provided at two months might sometimes be identical to interventions provided at six months. Ultimately, the timing of interventions should be based on the needs of given individuals. Timing guidelines should be used flexibly on a case- by-case basis. Distinctions between these time periods are an attempt to organize intervention strategies based on research findings. However, these recommendations may change as more research is conducted.

Descriptions of Psychosocial Interventions Included in the Review. The major interventions that are discussed in this review include psychological first aid (PFA), critical incident stress debriefing (CISD), cognitive behavior therapy (CBT), and eye movement desensitization and reprocessing therapy (EMDR). While the evidence in support of these interventions is described in more depth in subsequent sections, the interventions are described here for clarification.

Psychological first aid (PFA) is a psychosocial intervention that has been widely applied in the immediate aftermath of mass violence and disaster (i.e., first hours and days). PFA is generally described as the provision of emotional support in the form of warmth and kindness. It would also include meeting basic needs, such as encouraging people to eat and drink fluids in the first hours and days after a trauma. It is an unstructured, supportive intervention that does not involve systematic cognitive or emotional processing of the trauma. However, it operates

from a conceptual algorithm. The algorithm begins with making as assessment of safety and basic needs, followed by an assessment of whether the individual might benefit from stress reduction techniques or psychoeducation and whether he or she is at-risk for long-term adverse mental health outcomes (Young, 2006). The rationale for PFA is that everyone can potentially benefit from warmth and kindness and concrete assistance in the early aftermath of a disaster. It is also viewed as a means of identifying individuals who could benefit from a referral for further counseling.

Critical incident stress debriefing (CISD) was originally designed to promote emotional processing and normal recovery among groups of individuals exposed jointly to a traumatic event (e.g., first responders, combat veterans). It is intended to reduce the intensity and chronicity of symptoms, and to identify individuals who may be in need of additional support or psychotherapy (Mitchell & Everly, 1996). CISD is meant to serve as the crisis intervention component of a larger stress management package, Critical incident stress management (CISM). CISD is an intervention that can be implemented in either an individual or a group format, and consists of a semi-structured review of a traumatic event or "critical incident." Typically, participants in CISD are asked to give a systematic and detailed account of experiences and feelings surrounding the traumatic event (Mitchell & Everly, 1996). The overarching goal of CISD is to normalize reactions to traumatic events and promote recovery and return to work.

Cognitive behavioral therapy (CBT) for ASD and PTSD typically includes education, support, and sometimes stress management training, but also involves two additional major components–cognitive restructuring (CR) and exposure. CR is a cognitive approach based on the premise that problematic thinking styles and negative trauma-related beliefs cause or exacerbate painful emotions. Proponents of CR assert that by helping people to change their problematic thinking patterns and challenge their distressing beliefs, we can help them to reduce their distress. The CR technique entails helping individuals systematically identify, challenge, and ultimately change problematic thinking that may be contributing to their symptoms.

Exposure therapy is also typically included in CBT protocols. Exposure is a behavioral approach based on the premise that individuals with PTSD are expressing a conditioned fear response to thoughts, feelings, and situations that evoke memories of their traumatic experience. The rationale for exposure techniques is that they counter the client's avoidance tendencies, reduce the client's fear of their memories and of reminders of

the trauma, and help the client gain a sense of mastery regarding feared memories and situations. Exposure techniques can be implemented both in and out of the therapy office. Commonly, the client is encouraged to re-tell, repetitively and in detail, the trauma narrative in-session with the therapist (i.e., imaginal exposure), and to approach feared situations in the natural environment between sessions (*in vivo* exposure).

Eye movement desensitization and reprocessing (EMDR) is an intervention that combines elements of emotional processing with specific eye movements. The emotional processing component of EMDR involves a structured imagining of thoughts, feelings and images associated with the traumatic event, similar to the imaginal exposure component of CBT. This is then combined with structured eye movements that are guided by the therapist. The founder of EMDR hypothesizes that the eye movements serve as an external focus of attention, counterbalancing the internal focus of attention on the traumatic memory (Shapiro, 2001). EMDR is guided by the adaptive information processing model (Shapiro, 2001; Shapiro & Maxfield, 2002), which purports that information related to a traumatic event must be processed fully or else initial perceptions will be stored in memory exactly as they were observed, along with potentially distorted thoughts and perceptions. EMDR's founder, Francine Shapiro, hypothesizes that the eye movements and other dual-attention stimuli enhance information processing (Shapiro, 2001).

IMMEDIATE PHASE INTERVENTIONS (0-14 DAYS)

Brief Overview of the Research Evidence (0-14 Days)

Although a comprehensive review of the research base is beyond the scope of this manuscript, we do want to briefly reference the empirical evidence regarding immediate phase interventions. PFA has not yet been subjected to empirical research. However, it was endorsed by the expert panel as an appropriate intervention for the immediate aftermath of disaster because it does not involve high levels of emotional processing that appear to be inappropriate in the immediate aftermath (i.e., first hours and days) after trauma and its components are highly face valid.

The considerable debate about the efficacy and role of CISD as a component of PFA was taken into account by the expert panel, with the following conclusions. To date, there is no evidence to support CISD in terms of preventing long-term negative outcomes. Additionally, there have been studies of CISD that reported a higher incidence of negative

outcomes in those who received CISD compared with those who did not receive an intervention (for recent reviews, see Bisson, 2003; Litz et al., 2002; McNally et al., 2003; Watson et al., 2003). There are many possible explanations for these findings. For example, it is possible that CISD interventions are too brief to allow for adequate emotional processing or that they inadvertently decrease the likelihood that individuals will pursue more intensive interventions. However, most of the studies of CISD have serious methodological weaknesses, and the interventions under study were not highly consistent with each other. It is possible that future research will demonstrate that CISD may be useful for some populations. In the meantime, it cannot be endorsed as an effective intervention given the current state of the research.

The Roles of Mental Health Providers in the Immediate Phase (0-14 Days)

The expert panel concurred that during the immediate response period, all responders (including mental health providers) should focus primarily on helping survivors to meet their basic needs (e.g., safety, shelter, food, rest), as well as providing soothing human contact. Safety, comfort, and support should be the top priorities during this phase. Interventions should provide consumers with a sense of control and freedom of choice to minimize the possibility of negative effects. While a small proportion of survivors may need immediate triage to more formal psychiatric or psychological interventions, most consumers should receive no more than basic education and emotional and practical support during this early period.

Provision of Psychological First Aid. PFA could be conceptualized as an umbrella approach that would include many facets of meeting the needs of individuals who have been exposed to trauma within hours or days. For example, it could involve orienting survivors to a disaster response site, helping them navigate services, helping them obtain food or shelter, or allowing them the opportunity to share their thoughts and feelings or experiences (if they desired). Unlike exposure therapy or debriefing, the goal of PFA would not be to facilitate emotional processing. PFA allows room for those who do not wish to discuss the trauma to avoid doing so. In this way, PFA is non-interventionist. One aspect of PFA might involve obtaining permission to re-contact a survivor at a later point in time, to help make a referral for services if the survivor is continuing to experience distress after a period of time has elapsed.

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Death Notification and Registry of Families. There is also a role for mental health providers in providing support during the process of death notification and registering affected families. Initiation of a centralized service for notification and family support is an early priority for federal (FEMA, Red Cross, NTSB, FBI, military) and local agencies during the immediate aftermath of an event involving very high death tolls. Typically, families who are notified through the local coroner's office would be offered support at a family service center formed in the immediate aftermath. In addition, permission should be obtained at the time of notification for subsequent outreach and support. Ideally, the initial family outreach contact would be made by a local service provider, in order to maintain a consistent connection between immediate and continuing support.

Recommendations: Immediate-Phase Interventions (0-14 Days)

PFA is the approach that was endorsed by the expert panel for universal application after mass violence or disaster. Experts concurred that PFA is evidence-consistent and not likely to contain elements (such as systematic emotional processing) hypothesized to be potentially harmful for some in the immediate aftermath of trauma. There is also a role for mental health providers in assisting with death notification and registry of affected families in the immediate aftermath of mass violence.

Given the negative findings associated with CISD, there is concern that any intervention that focuses on emotional processing during the immediate (0-14 day) period may be contra-indicated. There are also simply pragmatic reasons to avoid interventions that rely on emotional processing in the immediate aftermath of a mass violence situation. The chaotic, highly stressful post-event environment warrants attention to basic needs and practical assistance, rather than to emotional processing. Finally, panelists expressed concern that most individuals in the immediate aftermath would not be cognitively or emotionally prepared to engage in intensive emotional processing of the trauma. These factors, together with general concerns that emotional processing may increase immediate arousal and distress, that individuals needing more intensive services cannot reliably be identified, and that many if not most early contacts with providers will be in contexts that do not allow continued monitoring of reactions, led the panel to reach consensus that any interventions that focus on emotional processing, such as Behavior Therapy approaches that involve exposure and Eye Movement Desensitization

Reprocessing (EMDR) cannot at present be recommended for use in the *immediate* aftermath of disaster or mass violence. Research is needed regarding these interventions, psychopharmacological methods, and other intervention approaches for use in the immediate aftermath.

EARLY PHASE INTERVENTIONS (2 WEEKS-3 MONTHS)

Brief Overview of the Research Evidence (2 Weeks-3 Months)

CBT is the intervention with the strongest support for preventing PTSD when delivered in this early phase. To date, this approach has been tested with individual survivors of motor vehicle accidents, industrial accidents, and non-sexual assault who met criteria for a diagnosis of acute stress disorder (ASD; Bryant et al., 1998; 1999; 2005). Delivered over the course of about 4-5 individual therapy sessions, and initiated about 2 weeks after the trauma, this intervention has been significantly more effective in preventing PTSD and in decreasing depressive symptoms, than simple education and support. A recent trial suggests that the addition of a hypnotic induction prior to the imaginal exposure component of this treatment further increased its potency (Bryant et al., 2005). Recently, Bisson, Shepherd, Joy, Probert, and Newcombe (2004) implemented a similar cognitive-behavioral treatment with patients attending an accident and emergency department following physical injury. They implemented the treatment slightly later than Bryant and colleagues; at 5-10 weeks after the traumatic event. Furthermore, participants in the Bisson et al. (2004) trial did not need to meet criteria for ASD to be included in the trial, however they did need to endorse elevations in PTSD symptoms for inclusion. Patients receiving the cognitive-behavioral intervention showed a significantly greater decrease in PTSD symptoms than the control group at the13 month follow-up (Bisson et al., 2004).

Bryant, Moulds, and Nixon (2003) published the first long-term follow-up study to a CBT intervention for ASD. They reported that four years after the short-term CBT intervention for ASD, participants who had received the CBT intervention showed a lower intensity of PTSD symptoms. The results provide preliminary evidence that an early CBT intervention for ASD is associated with long-term benefits in psychological functioning. Further research is needed to determine whether the early provision of CBT can help prevent long-term problems in other areas, such as depression, panic, and substance abuse.

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Cognitive-behavioral interventions have not been tested with mass violence or disaster survivors as an early phase post-disaster intervention. However, a cognitive-behavioral intervention relying on cognitive restructuring (without exposure) was delivered to some survivors of the New York City World Trade Tower attacks, beginning approximately 18 months after September 11th, as part of an "enhanced" service offered under the auspices of the federally funded "Project Liberty" crisis counseling programs. Clinicians reported that this intervention was well received by clients, but no formal outcome assessment has been conducted of the intervention, to date. In addition, a study by Gillespie, Duffy, Hackman, and Clark (2002) has provided a preliminary demonstration of the effectiveness of a cognitive-behavioral therapy provided to survivors of a terrorist event who developed PTSD. Although it was delivered on average around 10 months post-trauma, the approach can be implemented with those meeting criteria for PTSD as the 3-month period is approached. Ninety-one patients with PTSD resulting from a car bombing in Northern Ireland were treated with cognitive therapy, as advocated in a cognitive model of PTSD proposed by Ehlers and Clark (2000). The National Health Service treatment providers were given a brief training in the method, but had only modest prior training in cognitive-behavioral therapies for PTSD. Significant reductions in PTSD symptoms, comparable to those reported in previous research trials, were obtained.

The exposure element of some cognitive-behavioral interventions will not be appropriate for everyone (Bryant & Harvey, 2000). In cases where exposure methods may be contraindicated (e.g., traumatic exposure to horrific imagery, severe depression or suicide risk, acute bereavement), other methods, including cognitive restructuring, anxiety management or pharmacological intervention, may be used.

Other Interventions. Studies of CISD conducted in the period from 2 weeks to 3 months post-trauma have yielded equivocal results, with most studies finding no effect of CISD. Research is lacking regarding other interventions, such as EMDR, psychopharmacological interventions, and alternative therapeutic approaches, for use in the time period of 2 weeks to 3 months post-trauma.

The Roles of Mental Health Providers in the Early Phase (2 Weeks-3 Months)

Given that most individuals exposed to trauma do not develop full-blown psychopathology, there is good reason to believe that only a

minority of exposed individuals will require formal psychological interventions. Most survivors will experience transitory distress. To date, there is little empirical work to guide recommendations for this modal group of individuals. Experts concurred that most survivors of mass violence could potentially benefit from brief counseling contacts to facilitate coping efforts, monitor adjustment and provide referrals if needed.

Provision of Brief Crisis Counseling. Panelists agreed that for most survivors, early post-disaster phase services should involve the general components of disaster mental health care that are appropriate at all phases: Emotional support, reassurance, ongoing assessment, education about reactions to disaster, normalization of responses, coping support and advice, and direction to available resources. These components of counseling should be delivered in a variety of settings (e.g., at disaster relief centers, the homes of survivors, in shelters, at crisis counseling clinics). They will sometimes be delivered in brief informal conversations, and sometimes within more systematic counseling interactions (Young, 2002). This means that counselors must be prepared to vary their delivery of help according to the situation and the time available.

Counselors during this phase will often have the opportunity to have more extended discussions with survivors than can occur during brief outreach contacts. These discussions should provide significant opportunity to more carefully address survivors' primary ways of coping. Counselors should be attuned to the ways in which survivors are reacting to their experience across a variety of spheres (e.g., family, work, school). In addition to helping survivors manage classic posttraumatic symptoms, counselors should be equipped to help provide psychoeducation and coping skills training to help survivors manage a range of other issues that may arise or worsen after trauma, such as depression, anger, survivor guilt, substance abuse, worry, and sleep problems.

Assessment, Follow-Up, and Referral. In this early post-disaster phase, stress reactions will decrease significantly in many survivors. However, some will continue to experience significant problems in severity of distress and reactions/symptoms, alcohol/drug use, and family, social, or work/school functioning. General support procedures may be useful for less severe responses to trauma, but they are likely to be inadequate for those who are more severely impacted. Referrals to more formal treatment should be considered for individuals who are exhibiting extreme problems (e.g., inability to function independently, suicidality, alcohol abuse). Individuals who report significant levels of distress after the first few weeks may benefit from CBT, if it is available. However, in most typical disaster situations, the majority of referrals for

mental health treatment are made after a more substantial period of time has passed. For example, after 9/11, many survivors were not willing to consider pursuing mental health treatment for many months.

It is difficult in the first days and weeks following a disaster to reliably identify those in need of more intensive help. There is also much concern about referring someone for counseling who may not require it, associated both with concerns about risk of stigmatization and the overloading of scarce mental health resources in many post-disaster environments. One important option for disaster mental health providers is to obtain permission from those considered at possible risk (on the basis of an analysis of risk factors, such as high intensity of trauma exposure or history of previous traumatization or diagnosis of PTSD) for telephone follow-up at a later date. Such a practice may reduce the likelihood of unneeded referral, maintain contact with potentially vulnerable individuals, and provide for assessments to be conducted later, 2-3 months post-event, when the need for counseling may be more reliably determined, and when survivors might be more receptive to the offer of counseling help.

Provision of Enhanced Services. As part of Project Liberty, the crisis counseling program in New York after the terrorist attacks of 9/11, "enhanced services" were made available to survivors. These services provided a therapeutic opportunity for individuals who required intervention beyond initial crisis counseling, and may serve as a useful model to consider implementing after other disasters or mass violence situations. In the case of New York, these services were introduced approximately two years after the terrorist attacks. However, in future disasters, such interventions would ideally be offered much sooner.

In New York's enhanced services response, individuals scoring above a certain threshold on a paper-and-pencil referral form were given the opportunity to participate in manualized, brief (10-12 session) individual interventions. One of these interventions was based on cognitive restructuring methods, and was geared towards individuals who were continuing to experience post-disaster distress in any number of areas (Hamblen et al., 2003). Trainers from the National Center for PTSD provided a 2-day training in the intervention to Project Liberty grantees, and subsequently provided phone consultation to help with implementation. The manual has not yet been empirically examined with disaster survivors, but the techniques contained in the intervention are consistent with those supported in the empirical literature for a range of psychological problems (e.g., PTSD, anxiety, depression, guilt).

Another intervention that was introduced as an enhanced services option in New York was a cognitive-behavioral intervention for traumatic grief

developed by Katherine Shear of the University of Pittsburgh Medical Center (Shear et al., 2001). NYC therapists were trained in the intervention and subsequently were offered consultation in the treatment.

One major advantage of offering enhanced services within crisis counseling programs is that specialized interventions become available to all survivors of the disaster who are in need of them (as opposed to only survivors with health insurance or financial means). In addition, the approach utilized by Project Liberty provided the opportunity for numerous therapists to receive training in interventions based in research.

Recommendations: Early Post-Disaster Phase Interventions (2 Weeks-3 Months)

For the majority of individuals suffering from mild to moderate impairment in functioning, a supportive counseling approach with outreach, education about coping and recovery, and ongoing support and monitoring may be helpful in facilitating post-event recovery. For those with more severe decrements in functioning, a CBT approach is recommended as the best empirically-supported intervention for prevention of PTSD, debilitating anxiety, and depression. Panelists concurred that although this treatment has been shown to be effective for survivors in this early aftermath period, it may not always be practical to implement the treatment this early in the chaos of a mass violence situation. It is recommended that this treatment not be started until consumers have achieved some stability in terms of day-to-day living (e.g., food, shelter, work) so that they may fully engage in the treatment. In addition, CBT with an exposure component is generally not recommended for clients who are dealing with current suicidality or extreme dissociation (Bryant & Harvey, 2000).

Given that survivors may present with a range of problems after experiencing mass violence (e.g., depression, sleep problems, fear, guilt, substance misuse), experts also recommend the use of a flexible or modularized intervention that contains different components that can be used as appropriate. Such an intervention could contain state-of-the art modules based on the interventions with the strongest evidence for a variety of problems seen after trauma. CBT is the treatment with the strongest evidence base for several of these disorders. Panelists agreed that clinicians using a modularized protocol might begin with treatment of the primary disorder or more debilitating condition, and proceed with specialized treatments for other disorders as needed. Alternatively, the clinician may choose to begin with basic coping skills to provide the client with a foundation from which to engage in other more challenging

aspects of treatment, such as exposure. This type of stage-oriented approach to trauma treatment has been used successfully with survivors of prolonged childhood abuse (Cloitre, Koenen, Cohen, & Han, 2002). Other psychological interventions, such as EMDR and psychodynamic therapy, have not yet been empirically studied for use in the first 1-3 months after a trauma and are therefore not recommended at this time.

LATER PHASE INTERVENTIONS (3 MONTHS ONWARD)

Brief Overview of the Research Evidence (3 Months Onward)

While the experience of trauma may lead to long-lasting emotional scars, most people will experience a clinically meaningful decline in distress over the course of the first three months (e.g., Rothbaum et al., 1992; Valentiner et al., 1996). Research indicates that a substantial minority (averaging 11-15%) of individuals, however, will continue to experience high levels of distress or functional impairment beyond the three-month point. Given the state of the research literature, it is generally recommended that the interventions described elsewhere be used after a period of at least 3 months has passed since the trauma took place. However, there may be situations in which such interventions are applied earlier in some cases (e.g., a client is highly symptomatic and motivated for treatment) if therapist resources are available at an earlier stage. While the majority of interventions taking place after 3 months may involve supportive counseling and outreach targeting individuals who have mild-moderate decrements in functioning, the interventions described later are more formalized interventions for more severe symptoms, that have been subjected to more empirical research than some of the interventions described earlier in this report.

CBT for Chronic PTSD

Methodologically strong randomized controlled trials have consistently shown that CBT leads to significant reductions in PTSD (e.g., Bryant, Moulds, Guthrie, Dang, & Nixon, 2003; Foa, Dancu, Hembree, Jaycox, Meadows, & Street, 1999; Foa, Rothbaum, Riggs, & Murdock, 1991; Resick, Nishith, Weaver, Astin, & Feuer, 2002). Due to the consistent positive findings and methodological strength of these trials, panel experts agreed that CBT should be considered the gold standard treatment for PTSD at this time. Further work is needed to determine the

CBT components that are best tolerated, work most quickly, and are most efficacious. For example, it is possible that exposure alone or cognitive restructuring alone is as effective in reducing PTSD as the two CBT components in combination. Several studies have now been conducted that compared these two components and found roughly equivalent results using either approach (e.g., Marks, Lovell, Noshirvani, Livanou, & Thrasher, 1998; Resick et al., 2002; Tarrier et al., 1999).

EMDR for Chronic PTSD

Research support for EMDR has accumulated over the last few years. However, methodological problems in several of the EMDR trials made panelists hesitant to recommend EMDR as a first-line treatment. Several RCTs have now been published that suggest that EMDR is effective in reducing PTSD symptoms (Devilly & Spence, 1999; Ironson, Freund, Strauss, & Williams, 2002; Lee, Gavriel, Drummond, Richards, & Greenwald, 2002; Power et al., 2002; Rothbaum, 1997; Taylor et al., 2003). Although it seems clear that EMDR is associated with a reduction of PTSD symptoms, questions remain regarding the change mechanism behind EMDR and whether this mechanism is different from traditional exposure treatment.

Whereas Rothbaum (1997) compared EMDR to a waitlist control condition, the other five studies compared EMDR with CBT conditions, allowing for direct comparisons between EMDR and CBT. Of the five RCTs comparing EMDR and CBT, all found that both treatments were efficacious in reducing PTSD symptoms and found minimal differences in treatment outcome between the treatments. Although some authors found a slight superiority of EMDR (Ironson et al., 2002; Lee et al., 2002; Power et al., 2002), others found a slight superiority of CBT (Devilly & Spence, 1999; Taylor et al., 2003). Importantly, however, in two of the three studies that found a slight superiority of EMDR, interviewers were not blind to condition and were not always independent of the treating therapist (Lee et al., 2002; Power et al., 2002).

Although some studies have reported that CBT leads to faster symptom reduction (Taylor et al., 2003), others have found that symptoms improved faster in the EMDR condition (Ironson et al., 2002; Power et al., 2002). Tolerability appears to be roughly equivalent between EMDR and CBT. Of these five studies comparing CBT and EMDR, four found comparable drop-out rates in the two conditions (Devilly & Spence, 1999; Lee et al., 2002; Power et al., 2002; Taylor et al., 2003) whereas one found a lower drop-out rate in the EMDR condition (Ironson et al., 2002).

Selective Serotonin Reuptake Inhibitors (SSRIs) for Chronic PTSD

To date, there is strong evidence from double-blind trials suggesting that SSRIs are efficacious in reducing PTSD symptoms (e.g., Brady et al., 2000; Davidson, Rothbaum, Van der Kolk, Sikes, & Farfel, 2001; Marshall, Beebe, Oldham, & Zaninelli, 2001; Tucker et al., 2001). The U.S. Food and Drug Administration has approved Sertraline and Paroxetine for the treatment of PTSD, and SSRIs are generally considered to be a first-line psychopharmacological treatment for the disorder (Friedman, Donnelly, & Mellman, 2003). Studies also indicate that maintenance on SSRIs may help prevent the relapse of PTSD symptoms (Davidson, Pearlstein et al., 2001; Martenyi, Brown, Zhang, Koke, & Prakash, 2002). As noted by Friedman and colleagues (2003), some advantages of SSRIs include their low symptom profile and their potential use for a host of co-occurring conditions such as depression, other anxiety disorders, and impulsivity.

In Need of Further Study. Although many practitioners have been trained in and believe in the use of psychodynamic treatment for traumatized individuals, this approach to treatment has received little rigorous empirical testing. While it is possible that this approach will ultimately be found to be effective in reducing PTSD symptoms among survivors of mass violence and disaster, we cannot recommend it for PTSD treatment at the present time.

There are anecdotal and case study reports of numerous other psychological interventions that may or may not ultimately prove to be effective in the treatment of chronic PTSD. To our knowledge, there has not been any well-controlled research on other psychological interventions (e.g., thought-field therapy, traumatic incident reduction, time-limited trauma therapy, and visual/kinesthetic dissociation). These interventions cannot be recommended for the treatment of chronic PTSD until they have been subjected to empirical study.

The Roles of Mental Health Providers in the Later Phase (3 Months Onward)

In this later phase after mass violence and disaster, mental health providers would tend to play a more "typical" or traditional role. Anecdotal reports following disasters over the last few decades suggest that numerous individuals wait many months before pursuing traditional

mental health services. Sometimes, anniversary reactions or holidays will motivate those who have lost loved ones to seek treatment many months or even years after the loss.

Mental health treatment provided in the later phases may take traditional forms and may be offered through community mental health centers or private practitioners. In addition, Project Liberty initiated a program that allowed for the provision of enhanced services for individuals continuing to experience disaster-related distress over a year post-9/11. Interventions provided as part of enhanced services included a manualized cognitive restructuring protocol and a manualized intervention for traumatic bereavement. These interventions were carried out by Project Liberty grantees, and allowed for 9/11 survivors who might not have had the means to do so otherwise to gain access to treatment.

Recommendations: Later Phase Interventions (3 Months Onward)

For individuals with mild to moderate decrements in functioning, a recommended first line of intervention would be supportive counseling and psychoeducation (i.e., regarding effective coping, self-efficacy, social support, and trauma managing trauma reminders). For individuals with more severe symptomatology, given that CBT interventions have been most extensively studied and have yielded the strongest treatment effects to date for a wide range of psychological problems, we would recommend that CBT interventions be provided when available. EMDR and SSRIs have been consistently shown to be more effective than placebo, and might be used as alternatives if CBT is not available. Additionally, SSRIs might be used to supplement CBT or other psychotherapeutic interventions.

AREAS IN NEED OF FURTHER CLARIFICATION OR DEVELOPMENT

At present, recommendations can be made regarding individual interventions that are "evidence consistent," but not yet "evidence-based," due to the dearth of intervention studies that have been conducted with disaster and mass violence survivors. While there is a large body of research regarding interventions for chronic PTSD, most of these studies do not include mass violence or disaster survivors. The research base on early interventions is much smaller and primarily contains studies with

many methodological problems. Given the current state of the field, few recommendations can be made with certainty regarding the best way to intervene with survivors of disasters or mass violence. There is ongoing debate regarding who should be targeted for early intervention, when and which interventions should be introduced, and who should provide the services. Given that most people experience a high level of distress in the immediate aftermath of trauma, yet most will eventually recover, it is also difficult to determine who should be given interventions and at what stage these interventions should be introduced. Following is a list of several key areas related to interventions for mass violence and disasters that require further development or clarification. It should be acknowledged that this field is only beginning development. Most of the questions regarding individual interventions following mass violence and disaster have received little or no research attention to date. They are complex questions, and the answers are likely to be similarly complex. For example, it can be anticipated that findings regarding the optimal timing of interventions will depend on the nature of the event, outcomes being measured, populations being studied, and the nature of the interventions themselves. Effective ways of encouraging use of services will similarly depend upon these and other variables. It is important, as a starting place, to establish that individual interventions with mass violence/disaster survivors can significantly reduce important negative outcomes relative to no care or simple support. When this is established, more refined questions (e.g., related to timing of services, relative impact of intervention components, comparison of service delivery mechanisms) will warrant attention.

1. The impact of interventions across a broader array of outcomes. Although PTSD is one of the most common reactions to mass violence and disaster, other problems such as depression, substance abuse, and other anxiety disorders are common as well (e.g., Norris, Friedman, Watson, Byrne, Diaz, & Kaniasty, 2002). It is important that further investigations in the area of mass violence intervention include a broader range of outcome measures. Future studies should examine the impact of interventions on occupational, social, and interpersonal functioning, as well as depression, anger, and substance use. It would also be useful to know which interventions are most helpful for which combinations of problems after mass violence or disaster. Ideally, as further study is undertaken in these areas, researchers will be able to generate an empirically-based guide to practice.

2. Which early interventions are most appropriate for, effective with, and best tolerated by survivors of mass violence and disasters? At this point, CBT has the strongest empirical support as an early intervention, but it has not been studied among mass violence or disaster survivors. Research needs to be undertaken to examine the impact, feasibility, and tolerability of CBT approaches for this population. In addition, researchers should examine PFA and group-administered CISD in well-designed RCTs. Multiple modes of service delivery, including self-help, Internet-based care, and group-administered services, should be examined for feasibility and efficacy, given that mass violence by definition involves large numbers of people and cost-effective service delivery is an inherent challenge.

3. What is the most appropriate timing of interventions after mass violence or disaster? There is controversy regarding the optimal timing of interventions after mass violence or disaster. Unfortunately, minimal empirical work has been undertaken in this area. While most RCTs of CBT interventions undertaken with survivors within the first month of trauma have yielded positive outcomes (e.g., Bryant et al., 1998; Bryant et al., 1999), there are many groups who may not be willing or able to engage in emotionally intensive interventions in the early days or weeks after a trauma (e.g., those with severe anxiety or avoidance, substance abuse problems, suicidality). Further research is needed to compare similar interventions at varying time intervals in terms of their efficacy, tolerability, and acceptability to survivors.

4. How do we encourage use of disaster mental health services? Given that many survivors do not seek counseling, even in the face of significant distress and problems, it is important to investigate factors that determine use of services and to develop more effective ways of encouraging appropriate use.

5. What are the most powerful and necessary ingredients in existing interventions? Further research is needed to parse out the active components of the interventions that appear to be effective, such as CBT. It would be useful to compare the efficacy, speed of response, and tolerability (i.e., drop-out rate) associated with different CBT components (e.g., exposure and cognitive restructuring).

6. What is the impact of survivor education? Education is a central part of post-disaster services, yet little is known about its effectiveness in achieving its various objectives.

7. What interventions are most useful for individuals suffering from traumatic bereavement? Few empirical studies have been conducted regarding the special needs of individuals who suffer traumatic bereavement.

A few uncontrolled intervention trials have yielded promising results (e.g., Shear et al., 2001; Sireling, Cohen, & Marks, 1988), but RCTs of early interventions for traumatic bereavement are needed.

8. What interventions are most useful for children and adolescents? Few empirical studies have examined interventions for children and adolescents exposed to mass violence or disaster. Although there is a growing body of literature supporting the efficacy of CBT for traumatized children and adolescents, much of this literature is based on studies of sexually abused children. RCTs are needed that examine the efficacy of CBT and other interventions for children and adolescents exposed to mass violence or disaster.

9. Small group alternatives to debriefing need to be developed and tested. Debriefing appears to be associated with little positive effect, and at times is associated with a worsening of symptoms. CBT, in contrast, has been found to be associated with positive outcomes, but the individual CBT model may not be transportable to large-scale disaster situations. Small group alternatives to debriefing, such as CBT skills groups, should be developed and studied for use with survivors of mass violence or disaster.

10. Ways of enhancing social support among families and groups of survivors need to be investigated. While social support is widely acknowledged to be important in post-disaster recovery, interventions designed to improve support among family members, friends, and work colleagues have yet to be developed and evaluated.

11. All aspects of tele-mental health (computers, videos, telephones) need to be evaluated. A few studies have been conducted in these areas with promising results, but none has been conducted among survivors of mass violence or disasters. Given that tele-mental health could potentially provide an efficient means of reaching large numbers of survivors, it should be evaluated.

12. Written self-help materials require evaluation. Written information, including advice on coping, is widely distributed following events of mass violence and disaster. However, little is currently known about the utility of this information: whether it is used, retained, or valued by survivors, what is the best way of presenting information, and whether it accomplishes educational goals (e.g., normalization, self-referral to counseling, use of adaptive coping skills).

13. Effective models for training large numbers of providers need to be examined. At present, we have primarily anecdotal evidence suggesting that providers can be intensively trained, but we do not know whether these providers adhere to the treatments as they are taught or

whether interventions delivered by these recently-trained groups are effective. We also do not know who the best candidates for such intensive training are, and how such training should be provided.

NOTES

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